

# Wind Turbine

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# Wind Turbine

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## Power MOSFETS

- High Voltage MOSFETS
- High Power Modules
- Diodes, Rectifiers
- Power Capacitors
- Crowbar Resistors
- Thermistors
- Solid State Relays
- Optical Isolators
- Inductors/ EMI Filters
- Shunt Resistors
- ESD Protection
- LDOs
- Communications Interface Ics
- Transient/Overvoltage Protection Devices

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## Application Overview

A wind turbine is a device that converts kinetic energy from wind into mechanical energy that is used to drive a generator to produce electricity. Large grid-connected arrays of turbines are becoming an increasingly important source of commercial electric power. Wind turbine systems are usually generators with more than 2 MW of power and typically variable speed types. Solid-state power converters are used to interface the generator and power transmission system. Conversion efficiency, high reliability, and low maintenance are typical requirements for these systems. In addition, all wind turbine systems must be equipped with safety systems to prevent damage due to high wind speed or any other grid- or system-related problems.

## Wind Turbine : AC / Grid Filter, Filter Power Resistor

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### Power Resistor

| Product Name           | Status | Description                                             | Features                                                  | Package                         | Q-Level |
|------------------------|--------|---------------------------------------------------------|-----------------------------------------------------------|---------------------------------|---------|
| <a href="#">LPS800</a> | NEW    | Thick Film High Power Resistor<br>for Heatsink Mounting | 800W@85°C Tcase<br>Non inductive<br>Low thermal radiation | HeatSink<br>Mount<br>57x50x25.8 |         |

## Wind Turbine : Blade Pitch Control, Motor Control

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### Motor Drive

| Product Name                                        | Status | Description                                                                                              | Features                   | Package             | Q-Level |
|-----------------------------------------------------|--------|----------------------------------------------------------------------------------------------------------|----------------------------|---------------------|---------|
| <a href="#">VS</a><br><a href="#">-VSKDS409/150</a> | NEW    | Power Modules Schottky Rectifier, 200 A<br>ADD-A-PAK - 2 diodes in series<br>Generation VII construction | IF(AV)=200A<br>IFSM=20KAmp | MODULE<br>ADD-A-PAK |         |

## Wind Turbine : Condition Monitoring, Grid Quality

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### Voltage Sensor

| Product Name            | Status | Description                                                                                              | Features                                 | Package          | Q-Level |
|-------------------------|--------|----------------------------------------------------------------------------------------------------------|------------------------------------------|------------------|---------|
| <a href="#">SMM0204</a> |        | Thin Film Mini-MELF Resistors<br>Excellent stability and pulse handling<br>Advanced thin film technology | Low TCR 15ppm - 50ppm<br>High Pulse Load | SMD<br>MELF 0204 | AEC-Q   |

## Wind Turbine : Power Converter / Main Inverter, Crowbar Unit

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### Crowbar Resistor

| Product Name            | Status | Description                                                                                                            | Features                                                                         | Package    | Q-Level |
|-------------------------|--------|------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------|------------|---------|
| <a href="#">ULDGR00</a> | NEW    | Stainless Steel Braking/Crowbar Resist<br>Modular system - user expandable<br>High pulse energy capability up to 3.5MJ | R Value 5m $\Omega$ to 120m $\Omega$<br>Top: - 55 °C to + 375 °C<br>TCR 900ppm/K | Rack Mount |         |